

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 8, and 24-26 without prejudice of the subject matter therein. Currently amended claims are shown with additions underlined and deletions in ~~striketrough~~ text. No new matter is added by these amendments.

Listing of Claims:

1. (Currently Amended) An apparatus, comprising:
a housing;
a sensor coupled to the housing, the sensor configured to detect a user manipulation of at least a portion of the housing and output sensor signals associated with the user manipulation of the portion of the housing;
an actuator coupled to the housing, the actuator configured to output a force associated with the sensor signals; and
a first flex joint and a second flex joint each being coupled to the housing and the actuator, the first flex joint and a second flex joint configured to transfer the force output from the actuator to the housing to produce a haptic feedback.
2. (Previously Presented) The apparatus of claim 1, wherein the force is a rotary force.
3. (Previously Presented) The apparatus of claim 2, wherein the first flex joint is coupled to a rotating shaft of the actuator, and the second flex joint is coupled to a portion of the actuator excluding the rotating shaft.
4. (Previously Presented) The apparatus of claim 1, wherein the force output by the actuator is associated with an approximately linear motion with respect to the housing, the haptic feedback having a linear direction associated with the linear motion of the actuator.
5. (Previously Presented) The apparatus of claim 1, wherein the housing includes a substantially flat base configured to be in contact with a support surface, the movement of the actuator being substantially perpendicular to the substantially flat base of the housing.

6. (Currently Amended) The apparatus of claim 1, wherein the housing includes a contact member configured to be contacted by a user, the contact member being coupled to the actuator and configured to transmit the ~~inertial~~ force to the user.
7. (Previously Presented) The apparatus of claim 6, wherein the contact member includes at least a portion of a top surface of the housing.
8. (Cancelled)
9. (Currently Amended) The apparatus of claim 1, wherein the first flex joint includes a rotating member coupled to the housing ~~by the first flex joint~~.
10. (Currently Amended) The apparatus of claim 9, wherein the ~~first~~ second flex joint includes a collar coupled to the actuator, ~~the first flex joint couples the collar to the housing~~.
11. (Currently Amended) The apparatus of claim 1, wherein the actuator includes a rotating shaft having a range of motion, the first flex joint ~~includes~~ including at least one stop disposed within the range of motion of rotating shaft.
12. (Previously Presented) The apparatus of claim 1, wherein the actuator is configured to move with a bi-directional action, the force output from the actuator being associated with the bi-directional motion.
13. (Previously Presented) The apparatus of claim 1, wherein the housing is included within a handheld interface device.
14. (Previously Presented) The apparatus of claim 1, wherein the housing is included within a mouse.

15. (Previously Presented) The apparatus of claim 14, wherein the haptic feedback is configured to be associated with a graphical representation displayed by a host computer.

16. (Currently Amended) The apparatus of claim 1, further comprising a microprocessor coupled to the sensor and to the actuator, the microprocessor configured to receive host commands from a host computer and sensor signals from the sensor, and to output force signals to the actuator associated with the haptic feedback.

17. (Currently Amended) A haptic feedback interface device as recited in claim 14 wherein said interface device is configured to be operated on a pad, said pad configured to provide ~~providing~~ compliance between said device and a hard surface supporting said pad, ~~wherein said compliance~~ configured to magnify ~~magnifies said inertial~~ the force.

18. (Currently Amended) An apparatus, comprising:

a housing;

a sensor coupled to the housing, the sensor configured to detect a user manipulation of at least a portion of the housing and output sensor signals associated with the user manipulation of the portion of the housing; and

an actuator assembly coupled to the housing, the actuator assembly including an actuator, a first flex joint and a second flex joint each being coupled to the actuator, the actuator being configured to output an inertial force to the housing, the first flex joint and the second flex joint being configured to allow a movement of the actuator with respect to the housing.

19. (Currently Amended) The apparatus of claim 18, wherein the inertial force is a rotary force, the first flex joint is being coupled to a rotating shaft of the actuator, the second flex joint is being coupled to a remaining portion of the actuator.

20. (Currently Amended) The apparatus of claim 18, wherein the movement of the actuator is approximately linear with respect to the housing, the inertial force output by the actuator is being approximately linear.

21. (Previously Presented) The apparatus of claim 18, wherein the first flex joint includes a rotating member coupled to the housing.

22. (Previously Presented) The apparatus of claim 21, wherein the second flex joint includes a collar coupled to the actuator.

23. (Currently Amended) An actuator assembly comprising:
an actuator, the actuator being configured to output haptic feedback; and
a flexure mechanism configured to couple coupling the actuator to a housing, the flexure mechanism being configured to allow a movement of the actuator with respect to the housing, the flexure mechanism having a first portion and a second portion each being coupled to the actuator and including at least one flex joint-, the first portion of the flexure mechanism being coupled to a rotating shaft of the actuator and the second portion of the flexure mechanism being coupled to the remaining portion of the actuator.

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Currently Amended) The actuator assembly of claim 23, wherein the first portion of the flexure mechanism includes a rotating member coupled to the housing by ~~one of the~~ at least one flex joints.

28. (Previously Presented) The actuator assembly of claim 23, wherein the first portion of the flexure mechanism includes a collar coupled to the actuator and a flex joint coupling the collar to the housing.

29. (Currently Amended) The actuator assembly of claim 23, wherein the actuator is configured to move with a bi-directional motion, a the force output from the actuator being associated with the bi-directional motion to produce pulse and vibration haptic feedback.

30. (Currently Amended) A method comprising:
 detecting a user manipulation of a device;
 sending sensor signals associated with the user manipulation; and
 outputting an inertial force by a movement of an actuator with respect to a housing of the device, the actuator being coupled to the housing via a mechanism including at least two separate portions each being coupled to a different point on the actuator and the housing.

31. (Previously Presented) The method of claim 30, wherein the inertial force output by the actuator is a rotary force.

32. (Currently Amended) The method of claim 30, wherein the inertial force is linear, the movement is being bi-directional with respect to the housing, the movement being associated with the linear inertial force.

33. (Previously Presented) The method of claim 30, wherein the mechanism includes a flexure having at least two flex joints.

34. (New) An apparatus, comprising:
 a housing;
 a sensor coupled to the housing, the sensor configured to detect a manipulation of at least a portion of the housing and output sensor signals associated with the manipulation of the portion of the housing;
 an actuator coupled to the housing, the actuator configured to output a force associated with the sensor signals; and
 a first flex joint and a second flex joint each being coupled to the housing and the actuator, the first flex joint being coupled to a rotating shaft of the actuator and the second flex joint being coupled to a portion of the actuator excluding the rotating shaft, the first flex

joint and the second flex joint configured to transfer the force output from the actuator to the housing to produce a haptic feedback.

35. (New) The apparatus of claim 34, wherein the housing includes a substantially flat base configured to be in contact with a support surface, the movement of the actuator being substantially perpendicular to the substantially flat base of the housing.

36. (New) The apparatus of claim 34, wherein the housing includes a contact member configured to be contacted by a user, the contact member being coupled to the actuator and configured to transmit an inertial force to the user.

37. (New) The apparatus of claim 34, wherein the first flex joint includes a rotating member coupled to the housing.

38. (New) The apparatus of claim 37, wherein the second flex joint includes a collar coupled to the actuator.

39. (New) The apparatus of claim 34, wherein the rotating shaft of the actuator has a range of motion, the first flex joint including at least one stop disposed within the range of motion of rotating shaft.

40. (New) The apparatus of claim 34, wherein the actuator is configured to move with a bi-directional action, the force output from the actuator being associated with the bi-directional motion.

41. (New) The apparatus of claim 34, wherein the housing is included within a handheld interface device.

42. (New) An apparatus, comprising:
a housing;

a sensor coupled to the housing, the sensor configured to detect a manipulation of at least a portion of the housing and output sensor signals associated with the manipulation of the portion of the housing; and

an actuator assembly disposed within the housing, the actuator assembly including an actuator, a first flex joint and a second flex joint each being coupled to the actuator, the actuator being configured to output an inertial force to the housing, the first flex joint and the second flex joint being configured to allow a movement of the actuator with respect to the housing.

43. (New) The apparatus of claim 42, wherein the first flex joint is coupled to a rotating shaft of the actuator, and the second flex joint is coupled to a remaining portion of the actuator.

44. (New) The apparatus of claim 42, wherein the movement of the actuator is approximately linear with respect to the housing, the inertial force output by the actuator being approximately linear.

45. (New) The apparatus of claim 42, wherein the first flex joint includes a rotating member coupled to the housing.

46. (New) The apparatus of claim 45, wherein the second flex joint includes a collar coupled to the actuator.